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**VIA HAND DELIVERY**

Ms. Magalie Roman Salas, Secretary  
Office of the Secretary  
Federal Communications Commission  
445 Twelfth Street, S.W.  
Washington, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

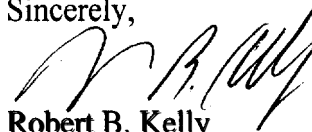
**RE: Ex Parte Presentation: ET Docket No. 98-95 (RM-9096);  
CC Docket No. 94-102**

Dear Ms. Salas:

On Tuesday, October 12, 1999, John Collins and Mark Johnson of the Intelligent Transportation Society of America ("ITS America") and Robert Kelly and Benigno Bartolome of Squire, Sanders & Dempsey, LLP, counsel to ITS America, met with Mark Schneider, Legal Advisor to Commissioner Susan Ness. During the meeting, the parties discussed the status of ET Docket No. 98-95, standards development, possible uses for DSRC-based ITS services, and ITS America's comments on related issues as reflected in its previous filings in this docket. In addition, the parties discussed the positive impact that E-911 might have on the deployment of various ITS services. A paper titled "FCC Briefing Paper on the Use of Wireless Phones as Data Probes in Traffic Management, Travel Information and Other ITS Applications" and a pamphlet containing information about ITS America were distributed at the meeting; a copy of these handouts are attached to this letter.

Pursuant to Section 1.1206 of the Commission's Rules, an original and three copies of this letter are being filed with your office for inclusion in the public record in the above-referenced proceeding. If you have any questions about this submission, please contact the undersigned.

Sincerely,



**Robert B. Kelly**  
Counselor for ITS America

cc: Mark Schneider  
Mark Johnson

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## FCC Briefing Paper on the Use of Wireless Phones as Data Probes in Traffic Management, Travel Information and other ITS Applications

- The proliferation of wireless technology across the United States is providing ITS with **an** enormously valuable tool to improve transportation. More than 74 million Americans now carry mobile wireless phones. Telecommunication experts expect that number to double over the next several years. This instant access to communication is enabling transportation managers and service providers to provide real time travel information and speed emergency assistance to those in need.
- Technology is developing rapidly in this area. Among the alternatives to provide E911 are terrestrial systems (e.g. triangulation, angle of arrival), GPS, and low-orbiting satellites. With the current rate of technological change, selecting the one best solution, or combination of solutions, for long term system investment is a daunting task for system administrators and designers.
- Deploying end-to-end E911 systems will require new and nontraditional partnerships, particularly among wireless carriers, emergency dispatch center administrators (called Public Service Answering Points or PSAPs), law enforcement, fire and **EMS** officials, automotive companies, consumer leaders, technology vendors, and state and local political leaders. And given the lack of progress to date, they probably need more allies.
- Other than the obvious public safety value of wireless E911, why would the **ITS** membership care about this issue? We believe there are four, interrelated reasons: (a) technical; multiple use of the location platform, (b) services, (c) financial, and (d) public policy/education. First, a short *summary* of each, and then more detail.
- **Technical.** Three separate E911 location vendors presented at ITS America's 1999 Annual Meeting and told the audience that their technologies not only provide latitude and longitude for individual phones, but can provide velocity and direction for aggregates of wireless phones, i.e., real time traffic information. This is generally referred to **as** the "vehicles **as** probes" concept. When a wireless phone is turned on, whether or not it is being used, it periodically sends out a signal ("**T**here"), so the wireless network knows where a phone is to deliver calls. It is this signal, not just relatively infrequent 911 calls, which provides the data source for ITS purposes. Thus, once an E911 location platform has been deployed, it can also serve **as** a platform for other important applications for state and local governments, and commercial entities.

- **Services.** If the location, speed and direction of cars carrying wireless devices (cell phones) can be pinpointed throughout the transportation network, traffic managers can measure the velocity and direction of travel on all roadways within the service area. Aggregates of this information can be provided to transportation managers so they can see traffic patterns and manage traffic congestion more efficiently. AVL for municipal and commercial vehicles can be provided inexpensively with a cheap wireless beacon. Commercial traffic data services will be stocked with extensive real time traffic information, and can personalize it because they will know the location and direction of travel of the caller.
- **Financial.** The current, stand alone detection technology required to provide extensive coverage of the roadway network can be expensive to purchase and maintain. To date, most transportation management agencies have concentrated detection and monitoring equipment on major freeways and commuter routes, providing useful, but limited data. Finding money for deploying even these limited systems is a battle. **An** alliance with E911 could be a major financial partner **for** those looking to develop or expand their detection capability. Typically, E911 is being funded by monthly fees on wireless subscribers. More than 30 states now have some level of E911 fee; mostly more than 50 cents per month per subscriber. That is a large sum of money, yet they are short of the funds necessary to install geolocation. ITS applications can provide wireless carriers with a business reason to install this location technology for purposes beyond E911.
- More detailed thoughts on the above:
  - There is a large projected market for dynamic route guidance. However, there is currently insufficient data across the transportation network to support national deployment of dynamic route guidance and personalized traveler information services.
  - E911 deployment can be a critical part of filling this **data** gap and can reduce dependence on expensive public infrastructure for this data. Note, however, that some technical solutions for E911 may be more helpful to ITS **than** others.
  - The additional traffic data obtained from cell phones being used **as** probes can enhance the richness and value of a transportation agency's data pool, improving the quality of traveler information and creating stronger market incentives for information service providers – and more revenue opportunities for wireless carriers if they install location systems.
- In addition, cell phone geolocation can provide alternatives for electronic payments including electronic toll collection and other point of service applications, allowing service providers (such **as** toll agencies) to charge fees directly to cell phone bills.

- Wireless geolocation will substantially improve automated trip itinerary planning for public transit. Cell phones with geolocation will enable users of a trip planning system to get real time transit information faster and more accurately, as they will no longer have to provide origin location data.
- This technology also may provide an alternative means for electronic toll collection, allowing toll agencies to charge fees directly to cell phone bills.
- Geolocation also can accelerate yellow page or valet services **for** auto travelers, providing them with route/location-specific travel-related information on hotels, gas stations, restaurants, tourist attractions, etc.
- Geolocation also enables other safety applications like Automatic Crash Notification (ACN). **ACN** automatically initiates a wireless 911 call transmitting data on the severity **of** the crash and related safety information (such **as** the type of vehicle). Location can be provided from the vehicle through **GPS** or terrestrial wireless locations systems.
- Some manufacturers such as Ford Rescu, **GM** OnStar, and Nissan currently notify third party calling centers when an airbag is deployed.
- Full ACN deployment would transfer, **in** real time, crash factors like change in velocity, whether **the** vehicle rolled over, the principal direction of force, etc., that can be placed into a triage algorithm to predict the likelihood of serious injury. The device also opens a voice channel so the victim can speak to **an** operator.
- Calspan, a division of Veridian, **has** equipped almost 600 cars in Buffalo with crash sensors and is currently conducting a live **ACN** test with **DOT** funding.
- Within the next year or two, small **ACN** units will be available **as** retrofits for vehicles at a fraction **of** the cost of the current systems (this **is** premised on terrestrial location with no **GPS** costs involved).
- However, there are a number of issues related to achieving end-to-end E911 and the additional applications such a platform may provide.
  - Are there technical constraints inherent in certain technologies which would limit using wireless devices in the manner described above? What are the integration challenges associated with using the technology for traffic management and traveler information? What are the implications for standards in this area?
  - What legal restrictions exist to such use (if any)?

- How do we protect the privacy of cell phone users?
- Are there other policy issues associated with wireless geolocation?
- Are there institutional constraints that may inhibit implementation?
- What financial barriers exist to widescale implementation?
- Technical and policy decisions being considered in deploying E911 will have a substantial impact on the ITS community's ability to leverage the E911 platform for a wide range of transportation-related services. Fully understanding these issues and options and their impact on ITS will be essential for the **full** advantage of the enhanced platforms to be realized.

### **ITS America's Activities to Date**

- ITS America is a member of and has been working with the ComCARE Alliance (Communications for Coordinated Assistance and Response to Emergencies), a coalition **of** more than **42** organizations representing nurses and doctors, public safety, police and fire departments, federal and state officials, citizen groups, and transportation and industry. ComCARE is working to educate the public and policymakers and mobilize mayors and county executives to provide leadership and make 911 work to save lives. ComCARE, which is building its own state chapter network, has approached ITS America about working together on joint chapter activities in **the** E911 area.
- ITS America participated in the E911 Critical Issues Forum in May. The forum highlighted issues and actions required to integrate transportation **EMS** and E911.
- ITSA's Advanced Traveler Information Systems committee **has** identified the travel "data gap" **as** a critical issue affecting rapid deployment of traveler information services.
- The **ITS** community **has** recognized the need for emergency services **and** law enforcement user services for the National ITS Architecture. However, interaction with these stakeholders has been limited in the past. The E911 issue **has** offered **us** an opportunity to engage them on a matter of mutual concern.



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*People using technology  
in transportation to save  
lives, time and money*

INTELLIGENT TRANSPORTATION

SOCIETY OF AMERICA

## WHAT IS ITS?

Intelligent Transportation Systems (ITS) are diverse technologies applied to transportation to save lives, reduce congestion, and enhance productivity. These technologies include information processing, communications, control systems and electronics. The industry is expected to have a market worth of more than \$430 billion by the year 2015.

## EXAMPLES OF ITS IN ACTION

ITS allows emergency equipment to reach the scene of an accident faster, saving lives. ITS enables commuters to re-route around congested areas, saving time. ITS means that deliveries can be made more efficiently because trucks can be weighed in motion and shipments can be tracked electronically, saving time and money.

## WHAT IS ITS AMERICA?

ITS America is a not-for-profit public/private partnership that promotes the development, deployment and use of technologies in transportation. Our annual budget exceeds \$8 million and we have a staff of more than 45 professionals to serve you. ITS America serves three primary roles:

- a utilized Federal Advisory Committee to the U.S. Department of Transportation
- a scientific and education association dedicated to advancing ITS professions
- a trade association representing the interests of the manufacturers and users of ITS.


We support international activities as well.

## WHO ARE MEMBERS OF ITS AMERICA?

Our members include organizations that research, plan, develop, deploy, market, buy and use Intelligent Transportation Systems. These members come primarily from the private sector, but also include local, state, federal and international government agencies, academic institutions and research centers, and other associations.

## MEMBERSHIP BENEFITS

1. Network with the creators, buyers and seller active in Intelligent Transportation Systems worldwide. Join our committees, our state Chapters and tap into our Web site.
2. Shape the products and services coming to market and influence the national ITS agenda by taking part in ITS America's technical committees and task forces.
3. Review the latest market research commissioned by ITS America at member rates.
4. Educate yourself at the ITS America Annual Meeting and training programs at reduced registration fees. Exhibit your products and services at substantially reduced rates.
5. Access ITS, our Web site has 30,000+ pages of ITS information and it will automatically send you items of interest as they are entered onto the Web.
6. Receive multiple publications — most of which are free with membership:
  - *ITS America News* — our highly regarded monthly newsletter
  - *ITS Quarterly* — our quarterly journal of diverse views and opinions
  - Special newsletters, technical guides, timely reports and resource guides, and ITS Fact Sheets which detail important industry trends.
7. Select one or more of our state chapters in which to participate.
8. Call on our professional and technical staff — we're eager to assist you.

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9. Profile your company in the Membership Directory on the Web. Advertise on the Web and in the ITS Quarterly.
  10. Present your capabilities to industry, legislators, and the press. Special ITS tours of your facilities can be coordinated by ITS America.
  11. Receive legislative updates.
  12. Participate in national and international standards development.
  13. Get international program access through the World Congress on Intelligent Transport Systems, trade missions, and outreach programs to international organizations.
  14. National and international fellowships are available to qualified industry fellows.
  15. Prepare the future leaders of ITS through our student chapter programs.

#### **MEMBERSHIP DUES**

Membership is open to any organization with an interest in ITS. Annual dues range from \$500 to \$15,000.

#### **FOR INFORMATION REGARDING ITS AMERICA**

Visit our Web site: [www.itsa.org](http://www.itsa.org)

Call Membership

Development at: 202-484-4847

Fax your inquiry to: 202-484-3483

Write to: ITS America  
400 Virginia Avenue, SW  
Washington, DC  
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## WHAT DOES ITS AMERICA DO?

### ✓ **Tackles Industry Challenges**

Through our committees, members confront the many crosscutting issues that challenge the successful deployment of ITS, such as standards, telecommunications, human factors, legal and institutional issues, and safety.

### ✓ **Provides Networking Opportunities**

Working through an organizational structure representative of both public and private interests, ITS America members acquire technical and market information.

### **/Increases Public Awareness**

ITS America manages an extensive campaign to increase public awareness and acceptance of the benefits of Intelligent Transportation Systems.

### **/Defines and Develops Policies**

As a utilized Federal Advisory Committee to the U.S. Department of Transportation (U.S. DOT), ITS America and its members help shape the national ITS program.

### **/Encourages Local and Statewide ITS Programs**

ITS America encourages public/private partnerships at the local and state levels via a network of state chapters.

### ✓ **Access ITS, Our Award-Winning Web Site**


Access ITS houses the largest database of ITS information in the world. Members may receive email advisories on topics of specific interest.

### **/State-of-the-Art ITS Technologies**

The ITS America Annual Meeting features more than 100 technical sessions and showcases an expansive exposition of the latest ITS technologies.

### ✓ **Fosters International Cooperation**

U.S.-based members work with member organizations in other countries and with our sister associations in Europe, Asia, Canada, and Australia to support international opportunities.



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